

## **AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Previously Presented) A method of detecting and/or quantifying an IgE antibody specific to a ligand in the form of an antigen, an antibody, or a hapten in a liquid sample suspected to contain the IgE antibody comprising the steps of:

- (a) contacting (i) the sample with (ii) a free dissolved ligand in the form of an antigen, an antibody, or a hapten to form a mixture I comprising complexes that comprise the IgE antibody and the ligand (IgE-containing complexes),
- (b) mixing the mixture I with a carrier to which is bound (iii) an IgE receptor, wherein said IgE receptor is CD23 (FcεRII), to form a mixture II comprising carrier-bound IgE-containing complexes,
- (c) separating the carrier-bound IgE-containing complexes from the mixture II, and
- (d) determining the amount of the carrier-bound IgE-containing complexes formed by detecting a label present in the carrier-bound IgE-containing complexes,

wherein the label to be detected is associated with the ligand or the IgE antibody and wherein the label to be detected is added to the complexes present in steps (a), (b), or (c) and does not form part of the carrier.

2. (Previously Presented) A method of detecting and/or quantifying an IgE antibody specific to a ligand in the form of an antigen, an antibody, or a hapten in a liquid sample suspected to contain the IgE antibody comprising the steps of:

- (a) contacting (i) the sample with (ii) a free dissolved labeled ligand in the form of an antigen, an antibody, or a hapten to form a mixture I comprising complexes that comprise the IgE antibody and the ligand (IgE-containing complexes),
- (b) mixing the mixture I with a carrier to which is bound (iii) an IgE receptor, wherein said IgE receptor is CD23 (FcεRII), to form a mixture II comprising carrier-bound IgE-containing complexes,
- (c) separating the carrier-bound IgE-containing complexes from the mixture II, and
- (d) determining the amount of the carrier-bound IgE-containing complexes formed by detecting the label present in the carrier-bound IgE-containing complexes.

3. (Previously Presented) A method of detecting and/or quantifying an IgE antibody specific to a ligand in the form of an antigen, an antibody, or a hapten in a liquid sample suspected to contain the IgE antibody comprising the steps of:

- (a) contacting (i) the sample with (ii) a free dissolved ligand in the form of an antigen, an antibody, or a hapten, wherein the ligand is bound to a label compound, to form a mixture I comprising complexes that comprise the IgE antibody and the ligand (IgE-containing complexes),

- (b) mixing the mixture I with a carrier to which is bound (iii) an IgE receptor, wherein said IgE receptor is CD23 (FcεRII), to form a mixture II comprising carrier-bound IgE-containing complexes,
  - (c) separating the carrier-bound IgE-containing complexes from the mixture II, and
  - (d) determining the amount of the carrier-bound IgE-containing complexes formed by detecting the label present in the carrier-bound IgE-containing complexes.
4. (Previously Presented) A method of detecting and/or quantifying an IgE antibody specific to a ligand in the form of an antigen, an antibody, or a hapten in a liquid sample suspected to contain the IgE antibody comprising the steps of:
- (a) contacting (i) the sample with (ii) a free dissolved ligand in the form of an antigen, an antibody, or a hapten and with (iii) a label compound to form a mixture I comprising complexes that comprise the IgE antibody and the ligand (IgE-containing complexes),
  - (b) mixing the mixture I with a carrier to which is bound (iv) an IgE receptor, wherein said IgE receptor is CD23 (FcεRII), to form a mixture II comprising carrier-bound IgE-containing complexes,
  - (c) separating the carrier-bound IgE-containing complexes from the mixture II, and
  - (d) determining the amount of the carrier-bound IgE-containing complexes formed by detecting the label present in the carrier-bound IgE-containing complexes,

wherein the label to be detected is associated with the ligand or the IgE antibody.

5. (Previously Presented) A method of detecting and/or quantifying an IgE antibody specific to a ligand in the form of an antigen, an antibody, or a hapten in a liquid sample suspected to contain the IgE antibody comprising the steps of:

- (a) contacting (i) the sample with (ii) a free dissolved ligand in the form of an antigen, an antibody, or a hapten to form a mixture I comprising complexes that comprise the IgE antibody and the ligand (IgE-containing complexes),
- (b) mixing the mixture I with a carrier to which is bound (iii) an IgE receptor, wherein said IgE receptor is CD23 (FcεRII), to form a mixture II comprising carrier-bound IgE-containing complexes,
- (c) adding a label compound to the carrier-bound IgE-containing complexes formed in step (b),
- (d) separating the carrier-bound IgE-containing complexes from the mixture II, and
- (e) determining the amount of the carrier-bound IgE-containing complexes formed by detecting the label present in the carrier-bound IgE-containing complexes,

wherein the label to be detected is associated with the ligand or the IgE antibody.

6. (Previously Presented) A method of detecting and/or quantifying an IgE antibody specific to a ligand in the form of an antigen, an antibody, or a hapten in a liquid sample suspected to contain the IgE antibody comprising the steps of:

- (a) contacting (i) the sample with (ii) a free dissolved ligand in the form of an antigen, an antibody, or a hapten to form a mixture I comprising complexes that comprise the IgE antibody and the ligand (IgE-containing complexes),
- (b) mixing the mixture I with a carrier to which is bound (iii) an IgE receptor, wherein said IgE receptor is CD23 (FcεRII), to form a mixture II comprising carrier-bound IgE-containing complexes,
- (c) separating the carrier-bound IgE-containing complexes from the mixture II,
- (d) adding a label compound to the carrier-bound IgE-containing complexes resulting from the separation step (c) to form a mixture II',
- (e) separating the labeled carrier-bound IgE-containing complexes from the mixture II', and
- (f) determining the amount of the carrier-bound IgE-containing complexes formed by detecting the label present in the carrier-bound IgE-containing complexes,

wherein the label compound is associated with the ligand or the IgE antibody.

7. (Canceled)

8. (Previously Presented) The method according to any one of claims 3-6, wherein the label compound is a chemiluminescent compound covalently bound to avidin, streptavidin, or a functional derivative thereof and the ligand is bound to biotin or a functional derivative thereof.

9. (Previously Presented) The method according to claim 8, wherein the chemiluminescent compound is an acridinium compound.

10. (Previously Presented) The method according to claim 1, wherein the ligand is bound to biotin or a functional derivative thereof.

11. (Previously Presented) The method according to claim 1, wherein the IgE-containing sample is contacted with the ligand and allowed to incubate to form a mixture I (step (a)) before contacting mixture I with the carrier/IgE receptor (step (b)).

12. (Previously Presented) The method according to claim 1, wherein step (a) and (b) are carried out simultaneously in one operation.

13. (Previously Presented) The method according to claim 1, wherein the carrier is a particulate material.

14. (Previously Presented) The method according to claim 1, wherein the carrier is a paramagnetic particulate material.

15. (Currently Amended) A method of evaluating the immunological status of a subject by detecting and/or quantifying an IgE antibody specific to a ligand in the form of an antigen, an antibody, or a hapten in a liquid sample suspected to contain the IgE antibody comprising the steps of:

- (a) obtaining a liquid sample suspected to contain an IgE antibody from the subject,
- (b) contacting (i) the sample with (ii) a free dissolved ligand in the form of an antigen, an antibody, or a hapten to form a mixture I comprising complexes that comprise the IgE antibody and the ligand (IgE-containing complexes),

- (b) (c) mixing the mixture I with a carrier to which is bound (iii) an IgE receptor, wherein said IgE receptor is CD23 (FcεRII) and/or FcεRI, to form a mixture II comprising carrier-bound IgE-containing complexes,
- (e) (d) separating the carrier-bound IgE-containing complexes from the mixture II, and
- (d) (e) determining the amount of the carrier-bound IgE-containing complexes formed by detecting a label present in the carrier-bound IgE-containing complexes,

wherein the label to be detected is associated with the ligand or the IgE antibody, wherein the label to be detected is added to the complexes present in steps (a), (b), or (c) and does not form part of the carrier, and wherein the IgE to be detected is quantified using CD23 alone to obtain a first measurement and using FcεRI alone to obtain a second measurement, and using both the first and the second measurement as a basis for evaluating the immunological status of [[a]] the subject.

16. (Previously Presented) The method according to claim 1, wherein the number of ligand molecules is between 100% and 200% of the number of IgE molecules to be detected.

17. (Previously Presented) A method of detecting and/or quantifying an IgE antibody specific to a ligand in the form of an antigen, an antibody, or a hapten in a liquid sample suspected to contain the IgE antibody comprising the steps of:

- (a) contacting (i) the sample with (ii) a free dissolved ligand in the form of an antigen, an antibody, or a hapten, to form a mixture I comprising

complexes that comprise the IgE antibody and the ligand (IgE-containing complexes),

- (b) mixing the mixture I with a carrier to which is bound (iii) an IgE receptor, wherein said IgE receptor is CD23 (FcεRII), to form a mixture II comprising carrier-bound IgE-containing complexes,
- (c) separating the carrier-bound IgE-containing complexes from the mixture II,
- (d) adding a label compound coupled to an antibody to the IgE to be detected to the complexes present in steps (a), (b), or (c) above to form a mixture II',
- (e) separating the labeled carrier-bound IgE-containing complexes from the mixture II', and
- (f) determining the amount of the carrier-bound IgE-containing complexes formed by detecting the label present in the carrier-bound IgE-containing complexes.

18. (Previously Presented) The method according to claim 17, wherein the label compound is coupled to the antibody via biotin.

19. (Previously Presented) The method according to claim 17 or 18, wherein the label compound coupled to the antibody to the IgE to be detected is added to the carrier-bound complexes separated in step (c).

20. (Previously Presented) A method of detecting and/or quantifying a specific IgE antibody in a liquid sample suspected to contain the IgE antibody comprising the steps of:



- (a) contacting (i) the sample with (ii) a free ligand in the form of an antigen, an antibody, or a hapten to form a mixture I comprising complexes that comprise the IgE antibody and the ligand (IgE-containing complexes), wherein the ligand is bound to biotin or a functional derivative thereof,
- (b) mixing the mixture I with a carrier to which is bound (iii) an IgE receptor, wherein said IgE receptor is CD23 (FcεRII), to form a mixture II comprising carrier-bound IgE-containing complexes,
- (b') separating the carrier-bound IgE-containing complexes from the mixture II and washing said complexes,
- (b'') adding to the washed carrier-bound IgE-containing complexes a solution of (iv) a chemiluminescent compound covalently bound to avidin, streptavidin, or a functional derivative thereof to form a mixture II',
- (c) separating the carrier-bound IgE-containing complexes from the mixture II' and washing the complexes, and
- (d) initiating a chemiluminescent reaction in the resulting IgE-containing complexes and detecting/measuring the resulting chemiluminescence, if any.

21. (Previously Presented) A method of monitoring and evaluating the immunological status of a subject comprising the steps of:

- (a) obtaining a liquid sample suspected to contain an IgE antibody from the subject,

- (b) contacting (i) the sample with (ii) a free ligand in the form of an antigen, an antibody, or a hapten to form a mixture I comprising complexes that comprise the IgE antibody and the ligand (IgE-containing complexes),
- (c) mixing the mixture I with a carrier to which is bound (iii) an IgE receptor, wherein said IgE receptor is CD23 (FcεRII), to form a mixture II comprising carrier-bound IgE-containing complexes,
- (d) separating the carrier-bound IgE-containing complexes from the mixture II, and
- (e) determining the amount of the carrier-bound IgE-containing complexes formed by detecting a label present in the carrier-bound IgE-containing complexes,

wherein the label to be detected is associated with the ligand or the IgE antibody and

wherein the label to be detected is added to the complexes present in steps (b), (c), or

(d) and does not form part of the carrier.

22. (Previously Presented) A method of monitoring and evaluating the immunological status of a subject receiving Specific Allergy Vaccination (SAV) treatment comprising the steps of:

- (a) obtaining a liquid sample suspected to contain an IgE antibody from the subject,
- (b) contacting (i) the sample with (ii) a free ligand in the form of an antigen, an antibody, or a hapten to form a mixture I comprising complexes that comprise the IgE antibody and the ligand (IgE-containing complexes),

- (c) mixing the mixture I with a carrier to which is bound (iii) an IgE receptor, wherein said IgE receptor is CD23 (FcεRII), to form a mixture II comprising carrier-bound IgE-containing complexes,
- (d) separating the carrier-bound IgE-containing complexes from the mixture II, and
- (e) determining the amount of the carrier-bound IgE-containing complexes formed by detecting a label present in the carrier-bound IgE-containing complexes,

wherein the label to be detected is associated with the ligand or the IgE antibody and wherein the label to be detected is added to the complexes present in steps (b), (c), or (d) and does not form part of the carrier.

23. (Previously Presented) A method of detecting and/or quantifying physiologically active forms of an IgE antibody specific to a ligand in the form of an antigen, an antibody, or a hapten in a liquid sample suspected to contain the IgE antibody by simulating *in vivo* interactions between the IgE antibody, the IgE antibody's ligand and the IgE antibody's receptor, comprising the steps of:

- (a) contacting (i) the sample with (ii) a free dissolved ligand in the form of an antigen, an antibody, or a hapten to form a mixture I comprising complexes that comprise the IgE antibody and the ligand (IgE-containing complexes),
- (b) mixing the mixture I with a carrier to which is bound (iii) an IgE receptor, wherein said IgE receptor is CD23 (FcεRII), to form a mixture II comprising carrier-bound IgE-containing complexes, and wherein the complexes that

comprise the IgE antibody and the ligand are formed prior to contact with the IgE receptor to simulate *in vivo* interactions between the IgE antibody, the ligand, and the IgE receptor,

- (c) separating the carrier-bound IgE-containing complexes from the mixture II, and
- (d) detecting and/or quantifying physiologically active forms of ligand-specific IgE bound to said receptor by determining the amount of the carrier-bound IgE-containing complexes formed by detecting a label present in the carrier-bound IgE-containing complexes,

wherein the label to be detected is associated with the ligand or the IgE antibody and wherein the label to be detected is added to the complexes present in steps (a), (b), or (c) and does not form part of the carrier and wherein *in vivo* interactions between the IgE antibody, the IgE antibody's ligand and the IgE antibody's receptor are simulated to measure physiologically active forms of IgE.